

REMARKS

Amendments to claims 1, 22, 31, and 63 are for the purpose of clarifying what Applicant regards as the invention. Amendments to claim 3 are to correct antecedent basis. Amendments to claim 4 are to bring this claim into conformity with the language of its base claim. No new matter has been added.

Applicant wishes to thank the Examiner for withdrawing the § 112 and § 102 rejections.

I. Claim Rejections under 35 U.S.C. § 101

Claims 1-13 stand rejected under 35 U.S.C. § 101. Claim 1 has been amended to recite a “processor.” Since the subject matter of claim 1 is performed at least in part by a processor, which results in physical transformation, claim 1 and its dependent claims should satisfy § 101.

II. Claim Rejections under 35 U.S.C. § 103

Claims 1-3, 7-9, 12-14, 18, 20, 23-27, 31-36, and 61-63 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. 2003/0086596 (Hipp) in view of U.S. Patent No. 6,266,443 (Vetro).

Claim 1 has been amended to recite that the act of enhancing is performed such that an image of the moving object is enhanced relative to an image of a relatively stationary object if the moving object moves relative to the stationary object, and wherein *the act of enhancing is accomplished at least in part by performing image averaging and image subtraction* (Emphasis Added). Claims 22, 31, and 63 have been amended to recite similar limitations. Applicant believes that the amendments have rendered the § 103 rejection moot. As an initial matter, Applicant agrees with the Examiner that Hipp does not disclose or suggest enhancing an image if the moving object moves relative to the stationary object, and therefore, Hipp also does not disclose or suggest accomplishing at least in part such enhancing by performing image averaging and image subtraction.

Vetro also does not disclose or suggest the above limitations. Rather, Vetro discloses a method for tracking an edge of an object. Vetro teaches enhancing an edge of an object by considering possible paths associated with motion of the object (see figure 3), not by performing image averaging and image subtraction, as described in the claims. Thus, Vetro also does not

disclose or suggest the above limitations, and fails to make up the deficiencies present in Hipp. Since both Hipp and Vetro do not disclose or suggest the above limitations, they cannot be combined to form the subject matter of claims 1, 22, 31, and 63. For at least the foregoing reasons, claims 1, 22, 31, and 63, and any claims depending therefrom, are believed allowable over Hipp, Vetro, and their combination.

Also, according to the Office Action, it would have been allegedly obvious to add “the object detection method of Vetro to the tracking method of Hipp to detect the boundaries of object.” As discussed, the combination of Hipp and Vetro does not result the subject matter of the claims. In addition, Applicant respectfully notes that Hipp already describes a specific technique that involves “Hough Transform” for detecting an object boundary (see paragraphs 57-60 of Hipp). It is understood that the method of Hipp is complete and satisfactory for its intended purpose to detect object boundary, and that Hipp only needs one (not more than one) detection method to accomplish its stated objectives. Thus, one skilled in the art would not be motivated to add another object detection method, i.e., the method of Vetro, to Hipp’s technique to detect object boundary.

In addition, Applicant notes that instead of using Hough Transform, Hipp specifically teaches using “snake” imaging technique for detecting object edges (see column 3, lines 41-64 of Hipp). Since Vetro and Hipp each describes a specific technique for the same purpose of edge detection, the methods disclosed in Vetro and Hipp are mutually exclusive from each other. Therefore, one skilled in the art would not be motivated to combine them. For these additional reasons, claims 1, 22, 31, and 63, and any claims depending therefrom, are believed allowable over Hipp, Vetro, and their combination.

Claims 40, 43, 46, 47-49, 50, 53, and 56 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,075,557 (Holliman) in view of Hipp.

Claim 40 recites that the act of determining whether the object has moved comprises *using a contrast associated with the first composite image* (which is obtained by performing a subtraction function) (Emphasis Added). Claims 50 and 53 recite similar limitations. According to page 16 (the fourth line from the bottom) of the Office Action, Holliman does not disclose that the first image is a composite image. However, Applicant also notes that the beginning of the

same paragraph on page 16 of the Office Action states that element 49 in figure 12 of Holliman allegedly discloses a composite image. Since it is unclear from the Office Action which element from Hipp is being combined with Holliman, Applicant respectfully submits that the prima facie case of the § 103 rejection has not been established, and requests that the rejection be withdrawn for claims 40, 50, and 53, and their respective dependent claims.

To the extent that the Office Action is relying on element 49 in figure 12 of Holliman for the alleged disclosure of a composite image, Applicant submits that such passage of Holliman does not disclose or suggest a composite image. Rather, element 49 of Holliman actually discloses template matching between a template and an image area (see figure 12), and therefore, the element 49 does not disclose or suggest a composite image.

Page 16 of the Office Action also cites to paragraph “40, lines 4-11” of Hipp. To the extent that the Office Action is relying on this passage of Hipp for the alleged disclosure of a composite image, Applicant also submits that such passage of Hipp does not disclose or suggest a composite image as described in the claims. Notably, the cited passage of Hipp discloses “averaging” adjacent images. Thus, the averaged image in Hipp is not a composite image that is obtained by performing a subtraction function, and therefore, cannot be considered to be the composite image as described in the claims. For at least the foregoing reasons, claims 40, 50, and 53, and their respective dependent claims are believed allowable over Holliman.

CONCLUSION

If the Examiner has any questions or comments regarding this response, please contact the undersigned at the number listed below.

To the extent that any arguments and disclaimers were presented to distinguish prior art, or for other reasons substantially related to patentability, during the prosecution of any and all parent and related application(s)/patent(s), Applicant(s) hereby explicitly retracts and rescinds any and all such arguments and disclaimers, and respectfully requests that the Examiner re-visit the prior art that such arguments and disclaimers were made to avoid.

The Commissioner is authorized to charge any fees due in connection with the filing of this document to Vista IP Law Group's Deposit Account No. 50-1105, referencing billing number VM 03-009. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Vista IP Law Group's Deposit Account No. 50-1105, referencing billing number VM 03-009.

Respectfully submitted,

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